

THE ASSOCIATION OF MANITOBA LAND SURVEYORS

RULES AND REGULATIONS OF THE BOARD OF EXAMINERS

SUBJECTS OF THE EXAMINATIONS AND EXTRACTS FROM THE STATUTES RELATING TO THE EXAMINATION AND ADMISSION OF MANITOBA LAND SURVEYORS

WINNIPEG, MANITOBA
WELLDON PRINTING COMPANY, LTD., 327 CUMBERLAND AVENUE
1914

RULES AND REGULATIONS
OF THE
BOARD OF EXAMINERS
FOR
MANITOBA LAND SURVEYORS

1. Before each meeting the examination papers will be prepared by the Board, and will be printed or typewritten.

2. The examination sittings shall commence each day at 9.30 a.m., continue until 12.30 p.m., recommence at 2.00 p.m., and continue until 5.00 p.m., day by day, until completed.

3. There will be one separate set of questions for each sitting. All the papers will be collected at the close of each sitting, and candidates will be held to have failed in any not answered at that time.

4. Any candidate obtaining assistance, during the hours of examination, by copying the papers of another candidate, or otherwise, will at once be dismissed, and any candidate who shall permit such copying or give such assistance, will be considered equally guilty and treated similarly.

5. Each sheet of paper shall bear at the top the subject, number of question and name of candidate, shall be written on one side only, and not more than one answer shall be written on the same sheet of paper.

6. The candidate shall not write on one line more than one step in geometrical or algebraic work. A single step may cover several lines, but two or more should in no instance be put on the same line.

7. No books or diagrams of any kind, except those allowed by the Board, shall be brought into the examination room.

8. Candidates are to present themselves punctually at the hours appointed for the commencement of the examinations, and no candidate will be allowed to enter the examination room later than fifteen minutes after that time, nor will any candidate be permitted to leave the room during a sitting, but as soon as he has finished his papers he may hand them to the examiner, after which he will not be allowed to re-enter until the next sitting.

9. In examining the papers of candidates each answer if perfectly correct, will be given the full number of marks allowed to it; if partly correct and partly wrong, such proportion of the total number of marks as the correct part of the answer bears to the whole question; and if entirely wrong, no marks; and no candidate will be admitted unless he has obtained the number of marks specified in the schedules herewith.

10. A candidate rejected by the Board shall not be entitled to a new examination before the next regular meeting of the Board.

11. Surveyors coming for examination under the provisions of Section 33 of the Land Surveyors' Act, shall submit to the Board evidence that they have served under articles the term required by the Act, when giving the notice prescribed by Section 26 of said Act, and shall submit their diplomas or commissions or certificates to the Board prior to writing on any examination.

12. Apprentices, articted to any Manitoba Land Surveyor under the provisions of Section 34, or Sections 35 and 36 of the Land Surveyors' Act, shall submit to the Board their diplomas, commissions or certificates, along with their Articles of Apprenticeship, as prescribed by Section 25 of said Act.

13. Each candidate for Examination for Admission to Practice shall bring with him a Transit instrument which he shall submit to the Board for their examination and approval, and he shall also submit a plan and field notes of a survey, all made by himself, which will be filed with the papers in practical surveying.

14. Candidates for Admission to Practise must submit to the Board at least seven days before the examination, Surveyor's certificate of service; failure to submit the same will render a candidate liable to forfeit his fee paid for examination should such certificate be rejected or considered insufficient by the Board.

15. The examiners will not communicate to any person the apparent or presumed results of the examination until the same have been officially announced.

16. Candidates for admission as pupils shall be examined in the following subjects, and no candidate shall be admitted except as provided in Rule 17, unless he obtains a total of at least 630 marks, and also obtains in each subject at least the number of marks shown as Pass Minimum in the following schedule:

	No. of Papers	Maximum Marks	Pass Minimum	Supple- mental Minimum
Penmanship	1	50	20	25
Orthography and English Grammar	1	200	160	160
Canadian History and Geography.....	1	100	40	50
Arithmetic and Logarithms	1	100	40	50
Algebra	1	100	40	50
Plane Geometry	2	200	80	100
Plane Trigonometry	1	100	40	50
Mensuration of Superficies	1	100	40	50

Time required: four days.

17. A candidate for admission as pupil who obtains at least 630 total marks, but fails in one or more subjects to obtain the pass minimum given above, will be permitted at one only of the two next ensuing regular examinations held by the Board to present himself for examination in the subjects only in which he has failed, but he will in such case be required to obtain the number of marks shown in the above schedule as supplemental minimum, and should he fail to do so he will be required upon again presenting himself for examination to take the full schedule.

18. Candidates for intermediate examination shall be examined in the following subjects, and no candidate shall be granted certificate of intermediate examination unless he obtains the total of at least 300 marks and also obtains at least the number of marks shown as pass minimum in the following schedule:

	No. of Papers	Maximum Marks	Pass Minimum
Geometry	1	100	50
Algebra	1	100	50
Trigonometry, Plane	1	100	50
Trigonometry, Spherical	1	100	50
Geology, Botany and Mineralogy	1	100	50

19. Candidates for admission to practice who are taking the full final examination shall be examined in the following subjects, and no such candidate shall be admitted except as provided in Rule 21, unless he obtains a total of at least 965 marks, and also obtains in each subject at least the number of marks shown as pass minimum in the following schedule:

	No. of Papers	Maximum Marks	Pass Minimum	Supple- mental Minimum
Geometry	1	100	50	60
Algebra	1	100	50	60
Trigonometry, Plane	1	100	50	60
Trigonometry, Spherical	1	100	50	60
Geology, Botany and Mineralogy..	1	100	50	60
Astronomy	1	100	50	60
Levelling and Curves	1	100	50	60
Practical Computations	2	200	100	120
Descriptions	1	200	125	140
Law and Practice and Principles of Evidence	2	200	150	150
Practical Surveying (includes 1 paper and field work)	1	200	150	150

20. Candidates for admission to practice who have previously obtained certificate of intermediate examination shall be examined in all the subjects contained in the Schedule to Rule 19 excepting the first five, and no such

candidate shall be admitted except as provided in Rule 21, unless he obtains a total of at least 665 marks and also obtains in each subject at least the number of marks shown as pass minimum in the above Schedule.

21. A candidate for admission to practice having been examined under Rules 19 and 20, and who has obtained at least the minimum total of marks required, but who has failed in one or more subjects to obtain the pass minimum given above will be permitted at one only of the two ensuing regular examinations held by the Board, or at a special examination, if such is held within one year for any other candidate, to present himself for examination in the subjects only in which he failed, but he will in such case be required to obtain at least the number of marks shewn in the above schedule as supplemental minimum, and should he fail to do so he will be required upon again presenting himself for examination to take the full schedule.

22. Candidates for admission to practice under the provisions of Section 33 of the Act shall be examined in Description, Law and Practice, and Principles of Evidence, and no such candidate shall be admitted unless he obtain at least the pass minimum in each of such subjects shewn in the Schedule to Rule 19.

Programme of Subjects of Examination for Admission as Pupil

PENMANSHIP, ORTHOGRAPHY and ENGLISH GRAMMAR

A subject will be given upon which the candidate is to write a composition of not less than 500 words.

For each error in orthography and in the fundamental rules of grammar in the paper thereon a deduction of five marks will be made, and account will be taken of orthographical and grammatical errors in all the papers.

CANADIAN HISTORY TO PRESENT TIME.

GEOGRAPHY.

General, with special reference to Canada.

Physical.

ARITHMETIC and LOGARITHMS.

Greatest common measure and least common multiple.—Vulgar and decimal fractions.—Measures of length, capacity, area, weight, time, and currency.—Square and cube root.—Use of logarithmic tables.—Multiplication, division, involution and evolution by logarithms.

ALGEBRA.

Elementary rules.—Highest common divisor.—Lowest common multiple.—Factoring.—Simplification of expressions.—Fractions.—Simple equation of one, two or more unknown quantities.—Quadratic equations and equations solved like quadratics.—Problems depending for their solution upon algebraic equations.

PLANE GEOMETRY.

Euclid's Elements:—First four books.—Proofs of the propositions.—Questions as to the propositions, their practical applications, and the arithmetical or algebraic propositions corresponding to those propositions which relate to lengths of lines or areas.

PLANE TRIGONOMETRY.

Measures of angles and arcs.—The trigonometric ratios.—Fundamental formulæ.—Signs of trigonometric tables.—Use of the tables.—Solution of plane triangles: right angled and oblique.—Problems depending upon the foregoing.

MENSURATION OF SUPERFICIES.

Areas of rectilineal figures, and of figures bounded by arcs of circles.—Areas of surfaces of right circular cones, circular cylinders, spheres, prisms, pyramids, and parallel-pipeda.

TEXT BOOKS AND BOOKS OF REFERENCE

Examination for Admission as Pupil.

Canadian History—Canada. Its History and Progress—Reeves.

Geography—Geography for Public Schools (Manitoba Edition). Stevenson & Barager.

Arithmetic—Hamblin Smith's Arithmetic (New Revised Edition).

Logarithms and Algebra—Elementary Algebra—Hall & Knight.

Geometry—Plane Geometry—Mackay, or Elements of Euclid—Todhunter.

Trigonometry (Plane)—Playne & Fawdry's Trigonometry, or Hall and Knight's Trigonometry.

Mensuration—Hamblin Smith's Arithmetic (New Revised Edition).

Programme of subjects of Examination for Manitoba Land Surveyor.

GEOMETRY.

First four and sixth books of Euclid's Elements and the definitions of the fifth.—Proofs of the propositions and of deduced propositions.—Questions on the propositions.—Application of geometry to plotting, and to surveying without angular instruments.—The eleventh book of Euclid's Elements.—Definitions, proofs and applications of the propositions.—The volume of solid bodies bounded by plane, spherical, conical, or cylindrical surfaces.

ALGEBRA.

Solutions of equations of the first and second degree of one or more unknown quantities.—Inequalities.—Involution and evolution.—Surds and imaginary quantities.—Proportion and progression.

PLANE TRIGONOMETRY.

Measures of angles and arcs.—The trigonometric ratios.—Fundamental formulæ.—Signs of trigonometric ratios.—Trigonometric functions of small arcs.—Inverse trigonometric functions.—Trigonometric tables, natural and logarithmic.—Use of the tables.—Transformation of trigonometric expressions.—Solution of trigonometric equations.—Solution of triangles.

SPHERICAL TRIGONOMETRY.

Great and small circles of the sphere.—Angles between great circles.—Propositions relating to the angles made by three or more planes passing through one point, and to the plane angles made by their lines of intersection.—Connection between these angles and the angles and sides of figures on a spherical surface bounded by arcs of great circles.—General propositions relating to the angles and sides of spherical triangles.—The polar triangle.—Proof of the

fundamental formulæ connecting the sides and angles of a spherical triangle.—Deduction of the formulæ for the solution of right-angled quadrantal, and oblique-angled triangles.—The conditions of ambiguity of solution of spherical triangles.—Solution of given triangles and problems depending for their solution upon spherical trigonometry.

ASTRONOMY.

The celestial sphere.—Spherical co-ordinates, altitude and azimuth, declination and hour angle, declination and right ascension, celestial latitude and longitude.—Co-ordinates of the observer's position.—Numerical expression of hour angles in time and arc.—Application of spherical trigonometry to the transformation from one system to another.—Solution of astronomical triangle.—Time: Sidereal and solar day; apparent and mean solar time; equation of time; astronomical and civil time; standard and meridian time; transformation of one kind of time into another.—The use of the Ephemeris or Nautical Almanac.—Simple interpolation.—Astronomical refraction, tables of refraction, variations of refraction with the pressure and temperature of the atmosphere.—Corrections to be applied to the observed altitude of the sun, or a star.—Calculation of the latitude of a place from an observation of the meridian altitude of the sun or a star.—Calculation of the local time and the azimuth from an observed altitude of the sun or a star.—Calculation of the direction of the meridian from an observation of a circumpolar star at its greatest elongation, or at any hour angle.

Candidates will be expected to take these observations for time, latitude and azimuth, practically, with an instrument in the presence of the Board.

PRACTICAL COMPUTATIONS.

Division of land in the form of triangles, quadrilaterals, or other rectilineal figures into parts in a given ratio, by straight lines drawn according to any given law.—Problems on the partition of land and the rectification of boundaries.—Measurement of areas bounded by crooked or curved boundaries.—Measurement of areas by division into triangles.—Measurement of the area included by a traverse by means of

latitudes and departures.—Balancing the traverse.—Supplying missing distances and bearings.—Computing dimensions and areas of parcels of land from data recorded in field notes. The methods adopted in making computations for this subject should be entirely practical.—Any shortened methods or approximations may be used, provided that the results are accurate to one-tenth of a foot in linear measurement, one-hundredth of an acre in area and thirty seconds in angular measurement.

LEVELLING.

Principles of.—Use and adjustment of instrument.—Keeping field notes.—Plotting profile and cross-section.—Taking out quantities.

CURVES.

Theory and practice of laying out simple and compound circular curves.—Use of spirals and vertical curves.

ELEMENTS OF MINERALOGY AND GEOLOGY.

BOTANY.

Elements of structural botany.—Distinguishing features of the forest flora of Canada.

DESCRIPTIONS.

Descriptions by metes and bounds.—Descriptions by sections or legal sub-divisions of the Dominion Land System.—Descriptions by plans of survey.

PRINCIPLES OF EVIDENCE, MANUALS OF SURVEY, DOMINION LANDS SURVEYS and other ACTS.

Drawing up affidavits as to position of lost corners, &c., and the acceptance or rejection of evidence with regard thereto.

The Manual of Survey of Dominion Lands, issued May 1, 1871, and subsequent issues, under instructions contained in which any portions of Manitoba may have been surveyed (as a large portion of the Province has been sub-divided in accord with issue of 1871, special attention is directed thereto).—Dominion Lands Surveys Act, Cap. 21, 7 and 8, Ed. VII.; S.C.—~~The Real Property Act, R.S.M., Cap. 171, Secs. 62 to 71.~~—The Registry Act, R.S.M., Cap. 172, Secs. 61 to 66.—The Plans Cancellation Act, R.S.M., Cap. 154.—~~The Special Surveys Act, R.S.M., Cap. 182.~~—The Land Surveyors'

Act, R.S.M., Cap. 190.—~~The Expropriation Act, R.S.M., Cap. 69, Secs. 8 to 14.~~—The Town Planning Act, Cap. 114, Sec. 23, 6 Geo. V.—Manitoba Supplementary Provisions Act, Cap. 99, Secs. 7 to 10, R.S.C. 1906.—The Surveys Act, Cap. 190, Consolidated Amendments, 1924.—The Public Schools Act, R.S.M., Cap. 165, Secs. 162, 177 to 180.—~~Municipal and Public Utility Board Act, Cap. 33, Secs. 98 to 106,~~ 16 Geo. V.—The Private Ditches Act, Cap. 7, 17 Geo. V.—~~Municipal Act, R.S.M., Cap. 133, Secs. 469 to 472;~~ 498 to 522; 613, 615 to 622, 634, 640 and 641, 655 to 666, 666A; and amendments to any of the above Acts or Sections.

PRACTICAL SURVEYING

Practical surveying, including the making of a small survey in the presence of examiners, taking field notes, plotting and determining courses of same from an observation and oral examination on the adjustment and principles of instruments.

The paper on this subject will include questions on the theory of instruments and their adjustment, on the methods of keeping field notes and on the methods of performing the ordinary survey operations in the field.

TEXT BOOKS AND BOOKS OF REFERENCE

Examination for Admission to Practise.

Geometry—Plane Geometry—Mackay, or Elements of Euclid—Todhunter.

Algebra—Elementary Algebra—Hall & Knight.

Trigonometry (Plane)—Playne and Fawdry's Trigonometry, or Hall & Knight's Trigonometry.

Trigonometry (Spherical)—Moritz's Spherical Trigonometry.

Astronomy—D.L.S. Supplement to the Manual. Practical Astronomy & Geodesy—L. B. Stewart.

Practical Computations—Theory and Practice of Surveying—Johnson, or Plane Surveying—Tracy.

Levelling—Theory and Practice of Surveying—Johnson, or Plane Surveying—Tracy.

Curves—Curves and Earthwork—Allen.

Mineralogy—Minerals and how they occur—Miller.

Geology—Elementary Geology—Coleman and Parkes.

Botany—Forest Flora of Canada—Spotten. Native Trees of Canada, published by Forestry Dept., Department of the Interior.

Descriptions—Paper on Descriptions by C. C. Chataway, M.L.S., in Annual Report of The Association of Manitoba Land Surveyors for 1924.

Evidence—Paper on Evidence by H. G. Beresford, M.L.S., in Annual Report of The Association of Manitoba Land Surveyors for 1916.

Extracts from the Land Surveyors' Act, R.S.M.
Chap. 190.

16. There shall be a board of examiners for the examination of candidates for admission to study, and for commissions to practise as land surveyors, which board shall consist of the secretary-treasurer and four other duly qualified members of the association, two of whom shall be appointed each year by the council at its first meeting after the annual election of officers by the association, to hold office for two years.

(2) In case of resignation, death, suspension, dismissal, disqualification, or inability to act, of any member of the said board, the executive council shall or may appoint a member of the association to be a member of the board for the unexpired portion of his term.

(3) Each member of the said board, before assuming the duties of an examiner, shall take and subscribe an oath of office according to the form A in the schedule to this Act, before a notary public, which oath shall be filed with the secretary and kept with the records of the board; and three members of said board shall form a quorum.

(4) The said board shall, as often as may be necessary, elect one of its members, other than the secretary, as its chairman, and shall have power to make rules and regulations, subject to the provisions of this Act and the by-laws of the association, for the conduct and management of examinations, and shall, annually, prior to the annual general meeting of the association and whenever else required by the council, make a report in writing to said council of the results of their examinations.

17. The said board shall meet and hold regular examinations of candidates annually in Winnipeg, at such place as shall have been appointed by the council, on the Tuesday after the first Monday in January, unless such Tuesday be a legal holiday, in which case they shall meet on the next day thereafter not being a holiday, and may adjourn such meeting from time to time as they may deem necessary.

(2) Unless the council shall otherwise decide and give due public notice of such decision, the board shall also hold regular examinations commencing on the first Monday in April of each year.

(3) A special examination for commission to practise as a surveyor may be held at any time at the discretion of the board on payment of a fee not exceeding fifty dollars in the case of one candidate, nor less than twenty-five dollars

each in the case of more than one candidate, in addition to the regular fees prescribed by this Act.

18. There shall be paid to each member of the said board who attends any examination, for each day's attendance, six dollars and his travelling expenses.

19. The council may appoint competent persons to assist the board of examiners in any of the subjects of examination, and shall fix the fees and expenses to be paid for such assistance; or the council may make such arrangements with the council of the University of Manitoba as may be deemed advisable and advantageous for the examination of candidates by the university in any subject, or portion thereof, forming part of the course of instruction required for either preliminary or final examination of candidates for commissions as Manitoba land surveyors.

20. No person shall, except as hereinafter provided, be admitted as an apprentice or pupil with any Manitoba land surveyor unless he has previously passed an examination, satisfactory to the board of examiners, in penmanship and orthography; English grammar, including dictation and composition; Canadian and General geography; Canadian history; arithmetic, including square and cube roots; nature and use of logarithms; algebra, including quadratic equations; plane geometry, including the first four books of Euclid and deductions; plane trigonometry, including its practical application to measurement of heights and distances; mensuration of superficies; practical geometry, including use of ruling pen and scales, and has obtained a certificate, in the form B in the schedule to this Act, of having passed such examination.

(2) An undergraduate of Manitoba University of the first year's standing may be admitted as an apprentice or pupil with any Manitoba land surveyor without passing the examination prescribed in the preceding sub-section but such undergraduate shall file with his articles a certificate from the registrar of the university of such standing.

21. Each applicant for examination, previous to apprenticeship, shall give at least one month's written notice to the secretary-treasurer of his intention to present himself for examination, and shall pay to the secretary the fee by this Act provided for receiving and entering such notice, and before being examined shall pay the fees chargeable under this Act for such examination.

22. No apprentice or pupil, except as hereinafter provided, shall be entitled to be examined for admission to practise as a Manitoba land surveyor unless he has previously

served regularly and faithfully for and during the period of three years, under articles in writing, according to, or to the effect as nearly as may be of, the form C in the schedule to this Act, duly executed before two witnesses, as pupil of a Manitoba land surveyor duly admitted and practising his profession, and produces a certificate from such surveyor in the form D in the schedule to this Act; or, if for some good and valid reason such certificate cannot be produced, unless he proves to the satisfaction of the board that he has so served; and such service shall include at least twelve months' actual practice in the field; and he shall also produce satisfactory certificates as to his character for probity and sobriety.

(2) In the case of an apprentice whose term of service under articles as aforesaid shall be within one month or less of having been fully completed at the time of the holding of a final examination, such apprentice may, with the written consent of the surveyor with whom he is so serving, and if he shall have complied with the law in all other respects, be permitted to undergo such final examination, and if successful shall, on complying with the provisions of this Act, receive a commission to practise.

23. If a surveyor dies or leaves the Province or is suspended or dismissed or disqualified, or ceases to practise, his apprentice may complete his term of apprenticeship, under articles as aforesaid, with another registered surveyor in actual practice.

24. A registered surveyor may, by an instrument in writing, transfer a pupil, with the pupil's consent, to another registered surveyor in actual practice, with whom he may serve the remainder of his term of apprenticeship, but such pupil shall not be entitled to be examined as aforesaid unless he produces the certificates of both surveyors in the form D in the schedule to this Act, or in default thereof such evidence of service as shall be satisfactory to the board.

25. An original duplicate of the articles of service of any apprentice, and of every assignment thereof, shall be transmitted to the secretary of the board within two months from the date thereof, with the necessary fee payable to the secretary for receiving and filing the same, and the secretary shall keep such original duplicate among the papers and records of the association. If such original duplicate or such assignment is not filed within the time hereinbefore stated the same may nevertheless be so filed with the secretary, but the time of service of the apprentice shall, unless the council shall otherwise order, be reckoned only from the date of such filing.

26. Every person desiring to be examined by the board, as to his qualification to be admitted as a land surveyor, shall give at least one month's written notice to the secretary-treasurer previous to the time fixed for the meeting of the Board, and shall therewith pay the fee prescribed by this Act.

27. No person shall be admitted to practise as a land surveyor in and for Manitoba until he has attained the full age of twenty-one years and, except as hereinafter provided, has passed an examination satisfactory to the board of examiners in the following subjects, viz.: Geometry, including Euclid, books 1 to 4 and 6, with definitions of 5, and the principles of solid geometry; algebra, including simple and quadratic equations, ratio, proportion, progression and doctrine of exponents; trigonometry, plane and spherical; latitude and departure method of computing areas and determining courses; mensuration of areas and contents; laying out and dividing off land; descriptions by metes and bounds for deeds and other documents; principles of evidence and drawing of affidavits; use and adjustments of surveying and levelling instruments, theory and practice of levelling, laying out circular and spiral curves; practical astronomy, including finding of time, latitude, longitude, azimuth, variation of the compass and drawing meridian lines; taking field notes and preparing plans; Dominion manuals of survey, and all the acts and laws relating to surveys and plans in Manitoba, including "Dominion Lands Act," "Mines Act," "Municipal Act," "Special Surveys Act" and the "Registry Act" and "Real Property Act," or any other Acts which may hereafter be passed amending or in substitution for the same; the rudiments of geology and mineralogy; elements of botany and the forest flora of Canada; and the sufficiency of his surveying instruments; and he shall produce satisfactory evidence as to character for probity and sobriety. He must be practically familiar with surveying operations and capable of intelligently reporting thereon and shall perform such practical operations in the presence of the Board, and shall answer such questions on oath (which oath may be administered by any one of the examiners), as the Board or any member thereof may require, as to his actual experience in the field and with regard to his instruments.

28. Any duly articulated apprentice or pupil may, not less than one year after filing articles, and after having given not less than thirty days' notice to the secretary, present himself at any regular examination of the Board for the examination referred to in the next preceding section, in geometry, algebra, trigonometry, plane and spherical, geo-

logy, botany and mineralogy, and upon passing the examination in such subjects (to be known as the "intermediate examination") to the satisfaction of the board and obtaining a certificate of intermediate examination therefor, in the form E in the schedule to this Act (or to the like effect), he shall be exempt from further examination in such subjects.

ADMISSION TO PRACTICE.

29. Every person who shall pass the examinations and fulfil the other requirements of this Act shall receive a commission from the association according to form F in the schedule to this Act, authorizing him to practise as a surveyor of lands in and for Manitoba, but before receiving said commission he shall, with two sufficient sureties, to the satisfaction of the Board, enter into a bond, in duplicate, in the form G in the schedule to this Act, jointly and severally, in the sum of one thousand dollars, to His Majesty, his heirs and successors, conditioned for the due and faithful performance of the duties of his office, and shall take and subscribe the oath of allegiance and the oath of office, as in form H in the schedule to this Act, before the said Board or any member thereof deputed by the Board for that purpose, and who are hereby empowered to administer the same.

(2) The said oaths of allegiance and of office shall be deposited and the said commission shall be recorded in the office of the Provincial Secretary.

(3) The said bond shall be deposited and kept in the manner prescribed by law with regard to bonds given for like purposes by other public officers, and shall inure to the benefit of any person sustaining damage by breach of any condition thereof.

(4) The secretary-treasurer shall cause the name of every person who receives a commission to be published in the next ensuing issue of The Manitoba Gazette.

33. Any person who has been duly qualified to practise as a land surveyor in any part of His Majesty's dominions, other than this Province, who shall satisfy the board of examiners that the qualifications as to terms of apprenticeship for so practising in the said portion of His Majesty's dominions were sufficiently similar to those required in this Province, and shall produce to the board his diplomas or certificates, shall not be required to serve any term of apprenticeship and shall, on passing an examination on the special laws governing surveys in the Province and on complying with the other requirements of this Act, be admitted to practise as a Manitoba land surveyor.

34. Any person who has been duly qualified to practise as a land surveyor in any part of His Majesty's dominions, other than this Province, who shall not satisfy the board of examiners that the qualifications as to term of apprenticeship for so practising in the said portion of His Majesty's dominions were sufficiently similar to those required in this Province, and shall produce to the Board his diplomas or certificates, shall only be required to serve during such period, not exceeding three years, as the Board may consider requisite, after which such person shall, on complying with other requirements of this Act, have the right to undergo the examination for permission to practise, or such portions thereof as the Board may deem necessary, and shall, if found qualified, be admitted to practise as a Manitoba land surveyor.

35. The privilege of a shortened term of apprenticeship shall be accorded to graduates of the Royal Military College of Canada and to graduates in civil engineering of the University of McGill College of Montreal, the University of Toronto, the School of Mining at Kingston, and of Manitoba University; and any such graduate shall not be required to pass the preliminary examination hereinbefore prescribed for admission to apprenticeship with a land surveyor, but shall only be required to serve under articles with a practising land surveyor, duly filed as required by Section 25, during twelve successive months of actual practice, of which at least six months shall be actual practice in the field, after which, on complying with the other requirements of this Act, he may undergo the examination for commission to practise prescribed by this Act.

36. Any person who shall have followed a regular course of study in all the branches of education required by this Act for admission as a Manitoba land surveyor, through the regular sessions for at least two years, in any college or university in any of His Majesty's dominions other than Canada, where there may be organized a complete course of such instruction, theoretical and practical, and who has thereupon received from such college or university a certificate, diploma or degree vouching therefor, and shall produce his diplomas or certificates and also satisfy the board that such course of study was sufficiently similar to that prescribed by this Act, shall not be obliged to pass the preliminary examination prescribed by this Act for admission to apprenticeship, and shall only be required to serve during such period, not less than one year, as the Board may consider requisite, after which, and on complying with the other requirements of this Act, such person shall have the right to undergo the final examination prescribed by this Act, and to qualify for a commission to practise.

48. In addition to such other fees as are provided for under this Act, there shall be paid to the secretary-treasurer for the use of the association,—

(1) by each person duly authorized to practise as a land surveyor, on applying for registration under this Act, \$1;

(2) by each applicant for preliminary or intermediate examination, with his notice thereof, \$2;

(3) by each applicant for preliminary or intermediate examination before being examined, \$20;

(4) by each applicant for certificate of preliminary or intermediate examination, \$2;

(5) by each apprentice on transmitting articles of indenture, after examination, \$5;

(6) by each apprentice with articles of indenture, without previous examination, \$10;

(7) by each apprentice with transfer of articles, or new articles for portion of term, \$2;

(8) by each applicant for final examination for commission, with notice, \$2;

(9) by each candidate for final examination for commission, before examination, \$50;

(10) by each candidate for a commission, \$50;

(11) by each applicant receiving a commission, being fee for official notice in The Manitoba Gazette, \$1.

The fee for supplemental final examination has been fixed by the association at \$25.

BY-LAW NO. 6.

THE ASSOCIATION OF MANITOBA LAND SURVEYORS.

1. Every applicant for the final or qualifying examination of the Association shall before presenting himself for examination pay along with his fee for such examination the required fee for a commission to practise as a surveyor, and the annual fee for the current year, and shall not be entitled to present himself for examination unless such fees shall be

paid in advance of the examination. Should the candidate fail to pass the examination the fees paid by him for such commission and as annual fee for the current year shall be returned by the Association.

FORM C—(SECTION 22.)

Articles of Indenture of Apprentice.

These articles of agreement, made the.....day of..... one thousand nine hundred and....., between A.B., of..... Manitoba, Land Surveyor, of the first part, and C.D., of..... and E.F., son (or ward) of the said C.D., of the second part, witnesseth:

That the said E.F., of his own free will, and by and with the consent of the said C.D., doth, by these presents, place and bind himself pupil to the said A.B., to serve him as such from the day of the date hereof, for and during and until the full end and term of three years from hence next ensuing and fully to be completed and ended. And the said C.D. doth hereby, for himself, his heirs, executors and administrators, covenant with the said A.B., his executors, administrators and assigns, that the said E.F. shall well and faithfully and diligently, according to the best and utmost of his power, serve the said A.B. as his pupil in the practice or profession of a Manitoba Land Surveyor, which he, the said A.B., now follows, and shall abide and continue with him from the day of the date hereof, for and during and unto the full end of the said term of three years; and that he, the said E.F., shall not at any time during such term cancel, obliterate, injure, spoil, destroy, waste, embezzle, spend or make away with any of the books, papers, writings, documents, maps, plans, models, drawings, instruments, field notes, moneys, chattels or other property of the said A.B., his executors, administrators or assigns, or of any of his employers; and that in case the said E.F. shall act contrary to the last mentioned covenant, or if the said A.B., his executors, administrators or assigns, shall sustain or suffer any loss or damage by the misbehaviour, neglect or improper conduct of the said E.F., the said C.D., his heirs, executors or administrators, will indemnify the said A.B., his executors, administrators or assigns, and make good or reimburse him or them the amount or value thereof; and further, that the said E.F. shall at all times keep the secrets of the said A.B. in all matters and things relating to the said business and profession, and will at all times during the said term be just, true and faithful to the said A.B. in all matters and things, and from time to time pay all moneys which he shall receive of, or belonging to, or by order of the said A.B., into his hands, and make and give the said A.B. true and fair accounts of all his acts and doings whatsoever in the said business and profession, without fraud or delay, when and so often as he shall thereto be required; and will readily and cheerfully obey and execute his lawful and reasonable commands, and shall not depart or absent himself from the service or employ of the said A.B. at any time during the said term, without his consent first had and obtained, and shall from time to time, and at all times during the said

term, conduct himself with all due diligence and with honesty and sobriety; and the said E.F. doth hereby for himself covenant with the said A.B., his executors, administrators and assigns, that he, the said E.F., will truly, honestly and diligently serve the said A.B. at all times for and during the said term, as a faithful pupil ought to do in all things whatsoever in the manner above specified.

In consideration whereof and of.....of lawful money by the said C.D. to the said A.B. paid at or before the sealing and delivery of these presents (the receipt whereof is hereby acknowledged), the said A.B. for himself, his heirs, executors and administrators, doth covenant with the said C.D., his heirs, executors and administrators, that he, the said A.B., will accept and take the said E.F. as his pupil, and that he, the said A.B. will, by the best ways and means he may or can, and to the utmost of his skill and knowledge, teach and instruct, or cause to be taught and instructed, the said E.F. in the course of study prescribed by "The Land Surveyors' Act" of Manitoba, in practical surveying operations, and in the use of instruments, and generally in the art, practice and profession of a Manitoba Land Surveyor, which he, the said A.B., doth now and at all times during said term shall use and practise, and also will provide the said E.F. with all the necessary and reasonable expenses incurred in transacting or performing the business of the said A.B., and also will, at the expiration of the said term, give to the said E.F. the certificate of service required by "The Land Surveyors' Act," and use his best means and endeavors, at the request, cost and charges of the said C.D. and E.F. or either of them, to cause and procure him, the said E.F., to be examined before the Board of Examiners of candidates for commissions as Manitoba Land Surveyors; provided the said E.F. shall have well, faithfully and diligently served his intended pupilage or apprenticeship;

And for the true performance of all and every the covenants and agreements aforesaid, according to the true intent and meaning thereof, each of them, the said A.B. and C.D., doth bind himself, his heirs, executors and administrators, unto the other, his heirs, executors, administrators and assigns, in the penal sum of.....hundred dollars, firmly by these presents.

In witness whereof, the parties aforesaid have hereunto set their hands and seals, the day and year first above written.

Signed, sealed and delivered in the presence of

G.H.

A.B. (L.S.)

J.K.

C.D. (L.S.)

E.F. (L.S.)

Note.—In case the apprentice is over the age of twenty-one years, the parent or guardian shall not be required to be a party to these articles.

FORM D—(SECTION 22.)

Surveyor's Certificate of Service.

I, A.B., of.....Manitoba Land Surveyor, do hereby certify and declare that C.D., of....., has regularly, faithfully and bona fide served as my apprentice, under "The Land Surveyors' Act," from the..... day of..... 19..... to the..... day of..... 19..... That during said term he has been engaged with me in the field on the following surveys, that is to say:— from the..... day of..... to the..... day of..... and from the..... day of..... to the..... day of..... (as may be), and that the said C.D. has always conducted himself with all due diligence, honesty and sobriety during said term of apprenticeship.

Given under my hand at..... this..... day of..... 19.....

A.B.,
M.L.S.

FORM G—(SECTION 29.)

Surveyor's Bond.

Know all men by these presents that we, A.B., of.....
Manitoba Land Surveyor, C.D., of....., and E.F.,
of....., are held and firmly bound jointly and severally to His Majesty the King, in the penal sum of one thousand dollars, to be well and truly paid to His Majesty, his heirs and successors, for which payment, to be well and truly made, we bind ourselves, our heirs, executors and administrators, firmly by these presents.

Sealed with our respective seals and dated the.....day of..... 19.....

The condition of this obligation is such that if the above bounden A.B. shall well and faithfully execute, fulfil and perform all duties of and pertaining to the office of Manitoba Land Surveyor, to which he has been commissioned, and shall not in any manner misconduct himself in the said office to the damage of any person being a party to or interested in any legal or lawful proceeding carried on, arising in or appertaining to said office or the duties thereof, then this obligation to be null and void, but otherwise to be and remain in full force and effect.

Signed and sealed in the presence of

A.B. (L.S.)
C.D. (L.S.)
E.F. (L.S.)

Affidavit of Justification of Sureties in Above Bond.

Province of Manitoba

Judicial District

To Wit:

We, C.D., of....., and E.F., of....
..... (giving name, residence and calling)...
the sureties mentioned in the foregoing (or
within) bond or covenant of and for one A.B., as Manitoba Land Sur-
veyor, make oath and say as follows:—

I, the said C.D., for myself, and I, the said E.F., for myself, say,
that I am seized and possessed to my own use in real and personal
estate, situate and held within the Province of Manitoba, of the actual
value of one thousand dollars, over and above all liens and encum-
brances affecting the same and above all exemptions to which I am
by law entitled and after payment of all my just debts.

Taken and sworn before me at..... C.D.

this..... day of..... 19..... E.F.

A Justice of the Peace, etc., (or as the same may be.)

FORM H—(SECTION 29.)

Surveyor's Oath of Office.

I, A.B., do solemnly swear (or affirm, as the case may be) that I
will faithfully discharge the duties of a Land Surveyor according to
law, without favor, affection or partiality. So help me God.

Sworn (or affirmed) before me at

this..... day of.....19

A.B.

6" x 9" INSERT SIZE
15.2 x 22.9 cm.

Cat. # 1456

ea.

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2½" x 6¾"
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2¾" x 5½"
3" x 5"

3⅜" x 4½"
3⅜" x 5"
3⅜" x 5⅜"
3⅜" x 6"
3½" x 4⅝"
3¾" x 8¾"

4" x 6"
4" x 9"
5" x 8"
6" x 9"
7⅜" x 3½" (IBM)
8½" x 11"

9" x 12"
9½" x 6"
10" x 9¾"
11⅝" x 14¾"
12⅜" x 12¼"
(RECORD ALBUM)
12¾" x 17¾"

